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ABSTRACT

Issues emerging from a collaborative evaluation of an interactive video teaching trial conducted in Rockhampton (Queensland, Australia) are reported. The trial aimed at providing an assessment of the feasibility and potential of interactive video technology for teaching and learning in a diverse area of Australia with a number of small, widely separated schools. Data were gathered through semi-structured interviews from teachers and students at the five participating schools, teachers of Japanese and French who took the lessons, administrators, and representatives of education agencies. Positive outcomes of the evaluation, which found potential for the technology in all areas, include: (1) the opportunity for engagement in research; (2) greater variation in approaches to evaluation; and (3) the potential application of the technology for the evaluators' teaching practices. Issues of concern are the political context of the evaluation, the practical inconveniences caused by the large number of evaluators, and conflicting perceptions of various stakeholders. It appears that positive outcomes have outweighed the negative issues at 6 months after the evaluation. (Contains 9 references.) (SLD)

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ISSUES IN THE COLLABORATIVE EVALUATION OF THE EFFECTIVENESS OF AN INTERACTIVE VIDEO TEACHING TRIAL

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R. Cox

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

This paper reports on several issues that emerged from a recent collaborative evaluation of an interactive video teaching trial conducted in Rockhampton by the Open Access Centre of the Queensland Department of Education in conjunction with the Capricornia Region of the Department of Education.

Positive outcomes of the collaborative evaluation include:

- the opportunity for engagement in research in an institution with an emerging research culture;
- greater variation in approaches to the evaluation, owing to the wider expertise of a larger group of evaluators; and
- experience with technology with a potential application for the evaluators' own teaching practice.

Issues of concern emerging from the collaborative evaluation include:

- the political context within which the evaluation took place;
- practical inconveniences caused by the involvement of a larger number of evaluators; and
- different stakeholders' conflicting perceptions of the nature and purpose of an evaluation.

The paper concludes by reflecting on the evaluation's impact on the evaluators' work six months after the evaluation was conducted.

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INTRODUCTION

This paper reflects on the benefits and problems experienced by the researchers involved in a collaborative evaluation of an interactive video teaching trial in April 1992 (Baker *et alia*, 1992). As well as related literature, the paper presents an overview of the evaluation, its positive outcomes, and its issues of concern. The paper concludes by assessing the evaluation's impact on the researchers' work six months after its completion.

RELATED LITERATURE

While this study's primary focus is on evaluation, there is relatively little comment in the literature on evaluation. Accordingly, the review has concentrated on the medium of instruction.

- 'Any new technology is likely to teach better than its predecessors because it generally provides better prepared instructional materials and its novelty engages learners' (Clark & Salomon, 1986). This 'novelty' effect seemed to hold for the present trial.

- Little work was found in the literature, both elsewhere and here in Queensland, where the Open Learning Centres network has not been greatly used for course delivery generally (Scriven & Lundin, 1992), let alone to primary schools. As far as primary school children are concerned, Brown (1990, p.70) notes three pilot projects were currently being conducted to small outlying multigraded schools in Saskatchewan, but offered no further details.

- 'Television is the richest of the...media, in terms of its density of information...it can combine all the major forms of symbolic representation: words, pictures, movement, sound, and 'real-time' representation of events... [It] can be particularly useful. .where there are no right or wrong answers, but where a variety of interpretations are not only acceptable but desirable as a teaching goal' (Bates, 1991, p.7).

- There is little doubt about the popularity of television as a medium for instruction. At tertiary level, Mitchell (1991) reviewed the South Australian TAFE videoconferencing experience across several campuses. Mitchell found the vast majority of students perceived videoconferencing to be an effective medium for learning, as good as or better than face-to-face. Student results also proved to be as good as or better than conventional classes (ibid).

- Despite this general enthusiasm, other writers have argued forcefully for alternative approaches, such as audiographic conferencing (Johnstone & Gilcher, 1988). These writers make the point that while students prefer face-

to-face interaction, they can and do adapt to the audiographic environment. They consider that if the teacher is enthusiastic and motivated, the students will take their cue from the teacher. Johnstone & Gilcher also found student results were just as good with audiographic conferencing as with other approaches.

- Another potential drawback to television as a medium has been pointed out by Osterndorf (1990). Television is generally perceived as an entertainment medium where involvement is passive. Osterndorf points out that the quality of instruction is more important than the quality of the broadcast, and that one of the best ways to achieve equality among learners is to eliminate students at the origination site. The current trial did just that.

- Not all teachers are suited to video and audio teleconferencing. Kirby & Boak (1989) outline a 'system for analyzing audio-teleconferencing instructional sessions' [SATA]. These authors found some teachers were considerably more effective than others at getting closer to the true potential of interactivity. This point could be explored further in future research.

- To conclude this section, the current writers agree with Mitchell (1991) that rural communities in particular can be given far richer educational opportunities in future, through the use of such technology. While Bates (1991, p.9) has argued that cost and accessibility of media are more important than pedagogy, this relatively cheap version of videoconferencing appears to score well on all counts.

OVERVIEW OF THE EVALUATION

The overview of the evaluation is presented in terms of three key areas:

Rationale

- Capricornia Region is a diverse area that has a significant number of small schools within a radius of 150 km of Rockhampton or its other major centres of Gladstone, Mackay, Emerald, Moranbah, and Biloela. It is not possible to provide the same level of educational programs (LOTE, music, science etc.) to the small schools as to the schools in the larger centres.

- This trial aimed at providing an assessment of the feasibility and potentiality of interactive video technology for teaching and learning. It was also used to consider the potential for professional development programs to isolated schools (Baker *et alia*, 1992).

- The trial was based on a Canadian project co-ordinated at the Model Informatics Centre, St James-Assiniboia, Manitoba. Using the amateur service frequencies for transmission there is a considerable cost saving over other technology systems in both equipment and transmission costs.

Methodology

- Data were gathered using a semi-structured interview schedule and were collected by seven researchers in a systematic manner.

- Interviews were conducted with the following participants in the trial:
  - teachers and students at the five participating schools;
  - the teachers of Japanese and French who took the lessons;
  - the Executive Director and other staff of Capricornia Region of the Department of Education;
  - representatives from the Open Access Support Centre and the Priority Country Area Program.

- It should be noted that there is the need to view the findings with the following cautions in mind:
  - not all interested parties or participants were able to be interviewed;
  - it can be assumed that those at the trial were pre-disposed towards the concept;
  - data reflect immediate impact as they were collected at the time of the trial;
  - there is a 'novelty' element in some of the responses.

Findings

- The technology was seen to have potential in all areas, including:
  - teaching at all levels and in most content areas;
  - across campus meetings as an alternative to teleconferences;
  - professional development, especially in the in-service of teachers from small schools.

- Reasons for the perceived potential included:
  - the immediacy of the feedback to the student and/or the teacher;
  - many people in isolated settings are used to operating similar technologies;
  - no restriction on content, though some content areas may be more adaptable to this technology than others;
  - would be ideal for use with children who are living on properties and are unable to move away from home;
  - would overcome the problem for teachers who travel long distances to attend in-service, the in-service to include in-service for parents as well;
  - could be used for 'homework' and 'catch-up' sessions;
  - would enhance specific lessons where teachers and/or equipment were not available to present the relevant material.

- Limitations were mostly of an organisational nature and were in areas that would be addressed as a trial became implemented. These included issues

such as:

- children need to be taught how to watch television;
- the quality of the sound needed some improvement;
- dedicated telephone line(s) would be needed so that the one line (usually) into the schools was not in constant use;
- appropriate furniture and room arrangement would be needed if this format was to be used regularly by a class group;
- there needed to be some specific task/involvement by the class teacher in the lesson.

POSITIVE OUTCOMES OF THE EVALUATION

The positive outcomes of the evaluation are discussed in relation to three major benefits to the evaluators:

The opportunity for engagement in research

- The varied backgrounds and experience of the researchers gave support, and a mentoring effect was achieved with the more novice researchers. The shared experience allowed for active participation by all and a learning experience for some.

Greater variation in approaches

- Prior to trial the discussion of open-ended questions to be asked after the trial was indicative of the diversity of expertise while consistency of feedback could be achieved.

- Division of labour meant the time spent gathering data was manageable (2-3 hours rather than 25 hours).

- Multiple views of trial due to various venues of researchers. Some were located at broadcast site while others experienced the trial in the schools.

- Immediate feedback. All participants were interviewed immediately following the trial so their experiences were recent. Department of Education administrators, LOTE teachers, classroom teachers, and students were all able to contribute views on the use of the interactive video teaching.

The potential application of technology for the evaluators' teaching practice

- The large number of researchers allowed for first hand experience with the technology, so that a multitude of possible uses in various teaching areas could be discussed.

- Inclusion of use and the merits of the technology is possible in a more concerted way in the Bachelor of Teaching course, because of the common experience of a large number of staff.

ISSUES OF CONCERN WITH THE EVALUATION

The major issues of concern with the evaluation have been identified as follows:

The political context of the evaluation

- The highly political nature of the trial caused the evaluation team to take particular care in writing the evaluation report.

- A problem occurred in regard to the misquoting of an interviewee, who perceived the misquoting as unacceptable because of the Departmental hierarchy being involved in the trial and privy to the evaluation report.

Practical inconveniences

- The importance of the methodology used in the evaluation (i.e., semi-structured interviews) being applied consistently across the seven researchers was difficult at times to achieve because of individual, interpersonal style.

- The problem of data being collated by a different person from those who collected it, often leading to misinterpretation, was identified.

Conflicting perceptions of the nature and purpose of an evaluation

- As there were a number of stakeholders in the trial, they each had a view of the purpose and focus of an evaluation. This impacted on our jobs as evaluators; for example, the expert in the technological aspects of the trial perceived the interviewees' negative comments about the technology to be of little value.

- The evaluation team were keen to be seen as independent and credible for the purpose of this evaluation. Because of the nature of the educational community in Central Queensland, this often involved shifting relationships for the purpose of the semi-structured interview.

CONCLUSION

Six months after the completion of the evaluation, what impact has it had on the evaluators' teaching and research work? The fact that five of the seven researchers contributed to this paper suggests that the positive outcomes outweighed the issues of concern, and that the partnerships formed during the evaluation are growing rather than contracting. The areas of concern nevertheless gave us helpful practice

at evaluating an exciting technology with considerable pedagogical potential. At any rate, this particular collaborative evaluation succeeded in giving the evaluators enjoyable as well as practical experience with an important field of educational research.

The researchers are interested in establishing contact with other academics involved in the evaluation of educational programs, and also in establishing a research culture in their respective university departments. Enquiries and/or information should be addressed to:

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